

Gunter, Jason

From: Nations, Mark [mnations@doerun.com]
Sent: Thursday, September 12, 2013 9:36 AM
To: Gunter, Jason
Cc: England, Jason; Yingling, Mark; Wohl, Matthew; 'Kevin Lombardozzi' (kevinl@VALHI.NET); 'Matt Whitwell' (mwhitwell@i1.net); Norman Lucas (cityhall@i1.net); robert.hinkson@dnr.mo.gov; Ty Morris (TMorris@barr.com); Ty Morris (TMorris@barr.com)
Subject: National progress report
Attachments: NATL 08-13.doc; 2013-08-21 NAT UAO Pace Lab Report.pdf

Jason,
Attached is the August progress report.
Mark

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Superfund

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Remediation Group

Mark Nations
Mining Properties Manager
mnations@doerun.com

September 10, 2013

Mr. Jason Gunter
Remedial Project Manager
U.S. Environmental Protection Agency
Region 7 - Superfund Branch
11201 Renner Blvd.
Lenexa, KS 66219

Re: National Mine Tailings Site Progress Report

Dear Mr. Gunter:

As required by Article VI, Section 51 of the Unilateral Administrative Order (Docket No.CERCLA-07-2006-0231) for the referenced project and on behalf of The Doe Run Company and NL Industries, Inc., the progress report for the period August 1, 2013 through August 31, 2013 is enclosed. If you have any questions or comments, please call me 573-518-0800.

Sincerely,

Mark Nations
Mining Properties Manager

Enclosure

c: Jason England – TDRC
Mark Yingling – TDRC (electronic only)
Matt Wohl – TDRC (electronic only)
Kevin Lombardozzi – NL Industries, Inc.
Matt Whitwell – City of Park Hills
Norm Lucas – Park Hills – Leadington Chamber of Commerce
Robert Hinkson – MDNR
Ty Morris – Barr Engineering

National Mine Tailings Site
Park Hills, Missouri
Removal Action - Monthly Progress Report
Period: August 1, 2013 – August 31, 2013

1. Actions Performed and Problems Encountered This Period:

- a. Barr and Doe Run staff continued to work with the landowners to determine the best way to access the mine shaft located in the Mine Shaft Area, as well as to verify who owns the property where the mine shaft is located.
- b. Work continued on the development of the Removal Action Report.

2. Analytical Data and Results Received This Period:

- a. During this period, water samples were collected at the sampling locations identified in Appendix C of the Removal Action Work Plan where water was present. Copies of the analytical results from the last sampling event are included with this progress report.
- b. During this period, the Ambient Air Monitoring Report for May 2013 was completed. Any issues identified in this report are discussed below. A copy of this document has been sent to your attention.

The May 2013 Ambient Air Monitoring Report noted the following:

- The action levels for lead and dust were not exceeded.
- No samples were taken with the TSP monitors on 05/27/13 due to the holiday.
- No samples were taken with the PM₁₀ monitors on 05/28/13 due to the holiday.

3. Developments Anticipated and Work Scheduled for Next Period:

- a. Complete rehabilitation activities on the mine shaft located in the Mine Shaft Area.
- b. Continue developing the Removal Action Report.
- c. Complete monthly water sampling activities as described in the Removal Action Work Plan.
- d. Complete air monitoring activities as described in the Removal Action Work Plan.

4. Changes in Personnel:

- a. None.

5. Issues or Problems Arising This Period:

- a. None.

6. Resolution of Issues or Problems Arising This Period:

- a. None.

End of Monthly Progress Report



Pace Analytical Services, Inc.
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(913)599-5665

August 30, 2013

Amy Sanders
The Doe Run Company
P. O. Box 500
Viburnum, MO 65566

RE: Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

Dear Amy Sanders:

Enclosed are the analytical results for sample(s) received by the laboratory on August 22, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mary Jane Walls for
Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334

New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60151523001	NAT SE	Water	08/21/13 08:14	08/22/13 08:30

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SAMPLE ANALYTE COUNT

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60151523001	NAT SE	EPA 200.7	JGP	6	PASI-K
		EPA 200.7	JGP	3	PASI-K
		SM 2540C	JML	1	PASI-K
		SM 2540D	JML	1	PASI-K
		SM 2540F	LEM	1	PASI-K
		SM 4500-H+B	JMC1	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		SM 5310C	TJJ	1	PASI-G

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ANALYTICAL RESULTS

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

Sample: NAT SE		Lab ID: 60151523001		Collected: 08/21/13 08:14		Received: 08/22/13 08:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Cadmium	ND	ug/L	5.0	2.5	1	08/26/13 10:15	08/28/13 11:46	7440-43-9	
Calcium	124000	ug/L	100	10.4	1	08/26/13 10:15	08/28/13 11:46	7440-70-2	
Lead	7.2	ug/L	5.0	2.4	1	08/26/13 10:15	08/28/13 11:46	7439-92-1	
Magnesium	59900	ug/L	50.0	6.5	1	08/26/13 10:15	08/28/13 11:46	7439-95-4	
Total Hardness by 2340B	556000	ug/L	500		1	08/26/13 10:15	08/28/13 11:46		
Zinc	387	ug/L	50.0	3.3	1	08/26/13 10:15	08/28/13 11:46	7440-66-6	
200.7 Metals, Dissolved (LF)		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Cadmium, Dissolved	ND	ug/L	5.0	2.5	1	08/24/13 10:25	08/26/13 18:08	7440-43-9	
Lead, Dissolved	2.8J	ug/L	5.0	2.4	1	08/24/13 10:25	08/26/13 18:08	7439-92-1	
Zinc, Dissolved	332	ug/L	50.0	3.3	1	08/24/13 10:25	08/26/13 18:08	7440-66-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C							
Total Dissolved Solids	620	mg/L	5.0	5.0	1		08/28/13 18:10		
2540D Total Suspended Solids		Analytical Method: SM 2540D							
Total Suspended Solids	16.0	mg/L	5.0	5.0	1		08/27/13 13:33		
2540F Total Settleable Solids		Analytical Method: SM 2540F							
Total Settleable Solids	ND	mL/L/hr	0.20	0.20	1		08/22/20 13:00		
4500H+ pH, Electrometric		Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	8.1	Std. Units	0.10	0.10	1		08/24/13 10:00		H6
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0							
Sulfate	302	mg/L	20.0	3.2	20		08/26/13 17:55	14808-79-8	
5310C TOC		Analytical Method: SM 5310C							
Total Organic Carbon	1.1	mg/L	1.0	0.082	2		08/29/13 01:51	7440-44-0	

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)

Pace Project No.: 60151523

QC Batch: MPRP/23970

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Total

Associated Lab Samples: 60151523001

METHOD BLANK: 1242325

Matrix: Water

Associated Lab Samples: 60151523001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	ND	5.0	08/28/13 10:53	
Calcium	ug/L	ND	100	08/28/13 10:53	
Lead	ug/L	ND	5.0	08/28/13 10:53	
Magnesium	ug/L	ND	50.0	08/28/13 10:53	
Total Hardness by 2340B	ug/L	ND	500	08/28/13 10:53	
Zinc	ug/L	ND	50.0	08/28/13 10:53	

LABORATORY CONTROL SAMPLE: 1242326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	1000	981	98	85-115	
Calcium	ug/L	10000	9980	100	85-115	
Lead	ug/L	1000	1010	101	85-115	
Magnesium	ug/L	10000	9960	100	85-115	
Total Hardness by 2340B	ug/L		65900			
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1242327

1242328

Parameter	Units	60151385001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	992	991	99	99	70-130	0	10
Calcium	ug/L	45600	10000	10000	55100	55400	95	98	70-130	1	9
Lead	ug/L	ND	1000	1000	994	991	99	99	70-130	0	10
Magnesium	ug/L	5330	10000	10000	15200	15200	99	99	70-130	0	9
Total Hardness by 2340B	ug/L	136000			200000	201000				0	
Zinc	ug/L	53.8	1000	1000	1070	1070	102	101	70-130	0	11

MATRIX SPIKE SAMPLE: 1242329

Parameter	Units	60151522001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	2.6J	1000	1020	102	70-130	
Calcium	ug/L	127000	10000	132000	48	70-130	M1
Lead	ug/L	4.6J	1000	989	98	70-130	
Magnesium	ug/L	43100	10000	51100	80	70-130	
Total Hardness by 2340B	ug/L	496000		540000			
Zinc	ug/L	1710	1000	2600	89	70-130	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

QC Batch: MPRP/23964 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60151523001

METHOD BLANK: 1241871 Matrix: Water
Associated Lab Samples: 60151523001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	ND	5.0	08/26/13 15:47	
Lead, Dissolved	ug/L	ND	5.0	08/26/13 15:47	
Zinc, Dissolved	ug/L	ND	50.0	08/26/13 15:47	

LABORATORY CONTROL SAMPLE: 1241872

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	1000	979	98	85-115	
Lead, Dissolved	ug/L	1000	998	100	85-115	
Zinc, Dissolved	ug/L	1000	994	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1241873 1241874

Parameter	Units	60151516002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Cadmium, Dissolved	ug/L	ND	1000	1000	982	974	98	97	70-130	1	10
Lead, Dissolved	ug/L	ND	1000	1000	987	980	99	98	70-130	1	10
Zinc, Dissolved	ug/L	9.8J	1000	1000	991	976	98	97	70-130	2	11

MATRIX SPIKE SAMPLE: 1241875

Parameter	Units	60151591001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	ND	1000	1000	100	70-130	
Lead, Dissolved	ug/L	ND	1000	954	95	70-130	
Zinc, Dissolved	ug/L	ND	1000	1000	99	70-130	

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)

Pace Project No.: 60151523

QC Batch: WET/43026

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60151523001

METHOD BLANK: 1240880

Matrix: Water

Associated Lab Samples: 60151523001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	08/28/13 18:09	

LABORATORY CONTROL SAMPLE: 1240881

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	968	97	80-120	

SAMPLE DUPLICATE: 1240882

Parameter	Units	60151506001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1190	1230	3	17	

SAMPLE DUPLICATE: 1244046

Parameter	Units	60151625023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	363	362	0	17	

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Date: 08/30/2013 03:51 PM

Page 8 of 16

**QUALITY CONTROL DATA**

Project: NATIONAL (MONTHLY)

Pace Project No.: 60151523

QC Batch: WET/43075

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60151523001

METHOD BLANK: 1243041

Matrix: Water

Associated Lab Samples: 60151523001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	08/27/13 13:30	

SAMPLE DUPLICATE: 1243042

Parameter	Units	60151648001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	12.0	10	18	25	

SAMPLE DUPLICATE: 1243043

Parameter	Units	60151528001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	131	131	0	25	

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

QC Batch: WET/43048 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH
Associated Lab Samples: 60151523001

SAMPLE DUPLICATE: 1241926

Parameter	Units	60151523001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.1	8.1	0	5	H6

REPORT OF LABORATORY ANALYSIS

Date: 08/30/2013 03:51 PM

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Page 10 of 16



QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

QC Batch: WETA/25939 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60151523001

METHOD BLANK: 1242295 Matrix: Water
Associated Lab Samples: 60151523001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	08/26/13 11:38	

LABORATORY CONTROL SAMPLE: 1242296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1242297 1242298

Parameter	Units	60151085001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	250	250	287	289	100	101	61-119	1	10	

MATRIX SPIKE SAMPLE: 1242299

Parameter	Units	60151516002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	28.3	25	56.8	114	61-119	

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

QC Batch: WETA/19129 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60151523001

METHOD BLANK: 845222 Matrix: Water

Associated Lab Samples: 60151523001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	0.50	08/29/13 01:11	

LABORATORY CONTROL SAMPLE: 845223

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.5	2.4	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 845224 845225

Parameter	Units	60151523001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Total Organic Carbon	mg/L	1.1	5	5	6.2	6.2	101	102	80-120	1 20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 845226 845227

Parameter	Units	10239135001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Total Organic Carbon	mg/L	21.6	50	50	72.6	73.6	102	104	80-120	1 20	

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QUALIFIERS

Project: NATIONAL (MONTHLY)

Pace Project No.: 60151523

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NATIONAL (MONTHLY)
Pace Project No.: 60151523

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60151523001	NAT SE	EPA 200.7	MPRP/23970	EPA 200.7	ICP/18752
60151523001	NAT SE	EPA 200.7	MPRP/23964	EPA 200.7	ICP/18749
60151523001	NAT SE	SM 2540C	WET/43026		
60151523001	NAT SE	SM 2540D	WET/43075		
60151523001	NAT SE	SM 2540F	WET/43016		
60151523001	NAT SE	SM 4500-H+B	WET/43048		
60151523001	NAT SE	EPA 300.0	WETA/25939		
60151523001	NAT SE	SM 5310C	WETA/19129		

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Sample Condition Upon Receipt

WO#: 60151523



60151523

Client Name: Doe RynCourier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐Tracking #: 7965 1143 5514Pace Shipping Label Used? Yes ☐ No ☒Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☒ 2 PLThermometer Used: (-19) / T-194Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples received on ice, cooling process has begun.
(circle one)Cooler Temperature: 2.1Date and initials of person examining contents: 8-22-13 B

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>Self Sol pA</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WET</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform <u>(TOC)</u> O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
		16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 8/22/13



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: 1 of 1	
Company: The Doe Run Company		Report To: Amy Sanders		Attention: Amy Sanders			
Address: PO Box 500		Copy To:		Company Name: The Doe Run Company		REGULATORY AGENCY	
Viburnum, MO 65566				Address: PO Box 500, Viburnum, MO 65566		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER	
Email To: asanders@doerun.com		Purchase Order No.:		Pace Quote Reference:		<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER	
Phone: 573-689-4535 Fax: 573-244-8179		Project Name: National (Monthly)		Pace Project Manager: Jamie Church		Site Location	
Requested Due Date/TAT: 5 - 7 Days		Project Number:		Pace Profile #:		STATE: MO	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analysis Test ↓ Y/N ↓	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	TSS/TDS	Sulfate		Settleable Solids	TOC	Cd, Pb, Zn (T&D)*	Hardness	pH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS		
* 200.7 Total Recoverable and Dissolved Metals (Lab Filter for dissolved)		Larry Hopkins		8/21/13	1200	Brent C. / PALE		8-22-13	0830	2-1	Y	Y
**analyzed within 24 hours with flagged data												

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER: Larry Hopkins					
SIGNATURE of SAMPLER: <i>Larry Hopkins</i> DATE Signed (MM/DD/YY): 8/21/13					